Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended): A method for routing data packets in a network, comprising grouping routing-table entries in a router into numbered clusters for lookup of a routing-table entry based on cluster number and destination address.

2. (original): A method as recited in claim 1, further comprising assigning a cluster number to a data packet.

3. (original): A method as recited in claim 2, further comprising routing said data packet based on a routing-table entry selected from a group of routing-table entries based on said cluster number and a destination address associated with said data packet.

4. (original): A method as recited in claim 3, further comprising replacing said cluster number of said data packet with a new cluster number when said packet is routed.

5. (original): A method as recited in claim 2, further comprising matching the cluster number associated with said data packet to a corresponding cluster number associated with said routing-table entries.

6. (original): A method as recited in claim 5, further comprising searching routing-table entries associated with said cluster number using a destination address associated with said data packet as an index.

7. (original): A method as recited in claim 6, further comprising routing said data packet using a routing-table entry corresponding to said destination address.

8. (original): A method as recited in claim 7, further comprising replacing said cluster number of said data packet with a new cluster number when said packet is routed.

9. (original): A method as recited in claim 1, further comprising assigning a Cluster Number (Incoming) and a Cluster Number (Outgoing) to each routing table entry.

10. (original): A method as recited in claim 9, further comprising assigning a Cluster Number (Incoming) to said data packet.

11. (currently amended): A method as recited in claim 10, further comprising routing said data packet based on a routing-table entry selected from a group of routing-table entries ~~corresponding~~ based on said Cluster Number (Incoming) and a destination address associated with said data packet.

12. (original): A method as recited in claim 11, further comprising replacing said Cluster Number (Incoming) of said data packet with the Cluster Number (Outgoing) associated with said selected routing-table entry when said data packet is routed.

13. (original): A method as recited in claim 9, further comprising matching the Cluster Number (Incoming) associated with said data packet to a corresponding Cluster Number (Incoming) associated with said routing-table entries.

14. (original): A method as recited in claim 13, further comprising searching routing-table entries associated with said Cluster Number (Incoming) using a destination address associated with said data packet as an index.

15. (original): A method as recited in claim 14, further comprising routing said data packet using a routing-table entry corresponding to said destination address.

16. (original): A method as recited in claim 15, further comprising replacing said Cluster Number (Incoming) of said data packet with the Cluster Number (Outgoing) associated with said corresponding routing-table entry when said data packet is routed.

17. (original): A method for routing data packets in a network, comprising:

grouping routing-table entries into numbered clusters for lookup of a routing-table entry based on cluster number and destination address; and

routing a data packet based on a routing-table entry selected from a group of routing-table entries based on a cluster number and a destination address associated with said data packet.

18. (original): A method as recited in claim 17, further comprising replacing said cluster number of said data packet with a new cluster number when said packet is routed.

19. (original): A method as recited in claim 17, further comprising matching the cluster number associated with said data packet to a corresponding cluster number associated with said routing-table entries.

20. (original): A method as recited in claim 19, further comprising searching routing-table entries associated with said cluster number using a destination address associated with said data packet as an index.

21. (original): A method as recited in claim 20, further comprising routing said data packet using a routing-table entry corresponding to said destination address.

22. (original): A method as recited in claim 21, further comprising replacing said cluster number of said data packet with a new cluster number when said packet is routed.

23. (original): A method as recited in claim 17, further comprising assigning a Cluster Number (Incoming) and a Cluster Number (Outgoing) to each routing table entry.

24. (original): A method as recited in claim 23, further comprising assigning a Cluster Number (Incoming) to said data packet.

25. (currently amended): A method as recited in claim 24, further comprising routing said data packet based on a routing-table entry selected from a group of routing-table entries ~~corresponding~~ based on said Cluster Number (Incoming) and a destination address associated with said data packet.

26. (original): A method as recited in claim 25, further comprising replacing said Cluster Number (Incoming) of said data packet with the Cluster Number (Outgoing) associated with said selected routing-table entry when said data packet is routed.

27. (original): A method as recited in claim 23, further comprising matching the Cluster Number (Incoming) associated with said data packet to a corresponding Cluster Number (Incoming) associated with said routing-table entries.

28. (original): A method as recited in claim 27, further comprising searching routing-table entries associated with said Cluster Number (Incoming) using a destination address associated with said data packet as an index.

29. (original): A method as recited in claim 28, further comprising routing said data packet using a routing-table entry corresponding to said destination address.

30. (original): A method as recited in claim 29, further comprising replacing said Cluster Number (Incoming) of said data packet with the Cluster Number (Outgoing) associated with said corresponding routing-table entry when said data packet is routed.

31. (original): A method for routing data packets in a network, comprising:

grouping routing-table entries into numbered clusters for lookup of a routing-table entry based on cluster number and destination address;

matching a cluster number associated with a data packet to a corresponding cluster number associated with said routing-table entries; and

routing said data packet based on a routing-table entry selected from a group of routing-table entries based on the cluster number and the destination address associated with said data packet.

32. (original): A method as recited in claim 31, further comprising replacing said cluster number of said data packet with a new cluster number when said packet is routed.

33. (original): A method as recited in claim 31, further comprising searching routing-table entries associated with said cluster number using a destination address associated with said data packet as an index.

34. (original): A method for routing data packets in a network, comprising:

grouping routing-table entries into clusters;

assigning a Cluster Number (Incoming) and a Cluster Number (Outgoing) to each routing table entry;

assigning a Cluster Number (Incoming) to a data packet;

matching the Cluster Number (Incoming) associated with said data packet to a corresponding Cluster Number (Incoming) associated with said routing-table entries;

searching routing-table entries associated with said Cluster Number (Incoming) of said data packet using a destination address associated with said data packet as an index; and

routing said data packet based on a routing-table entry corresponding to the destination address associated with said data packet.

35. (original): A method as recited in claim 34, further comprising replacing said Cluster Number (Incoming) of said data packet with the Cluster Number (Outgoing) associated with said selected routing-table entry when said data packet is routed.

36. (original): A method for routing data packets in a network, comprising:

grouping routing-table entries into clusters;

assigning a Cluster Number (Incoming) and a Cluster Number (Outgoing) to

each routing table entry;

assigning a Cluster Number (Incoming) to a data packet;

matching the Cluster Number (Incoming) associated with said data packet to a corresponding Cluster Number (Incoming) associated with said routing-table entries;

searching routing-table entries associated with said Cluster Number (Incoming) of said data packet using a destination address associated with said data packet as an index;

routing said data packet based on a routing-table entry corresponding to the destination address associated with said data packet; and

replacing said Cluster Number (Incoming) of said data packet with the Cluster Number (Outgoing) associated with said selected routing-table entry when said data packet is routed.